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# Combat Crew

strategic air command

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NOVEMBER 1982

# READY THEN

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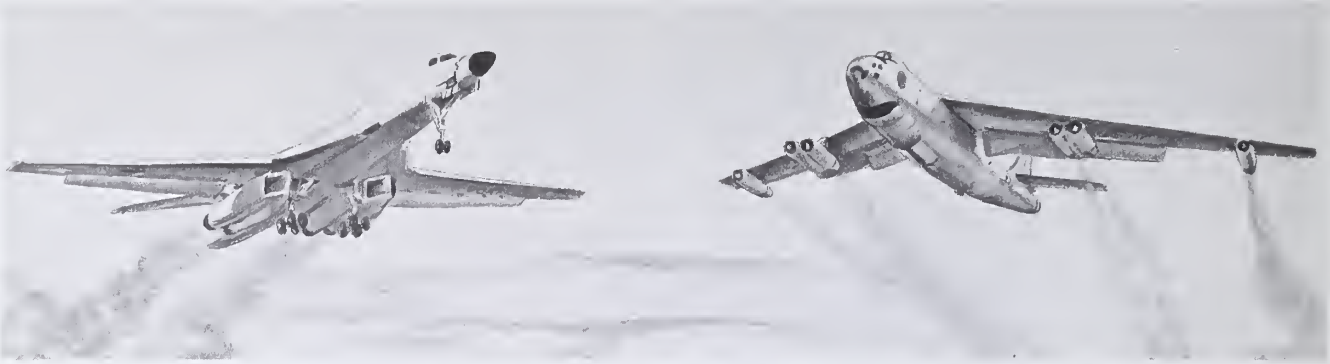

# SAC — TWENTY-FIVE YEARS OF ALERT "READY THEN — READY NOW"

On October 1, 1957, Gen Thomas S. Power, then commander in chief, SAC, formally initiated the ground alert concept. I remember that day well because my B-36 crew "pulled" that first alert tour at Biggs AFB, Texas. Alert conditions were somewhat primitive and makeshift in the initial days, but the urgency and importance of what we were doing overshadowed the inconveniences. Since that first day of ground alert we have seen first-hand the power of deterrence that SAC alert has provided this nation. We have learned many lessons over the years, but especially that, "To be prepared to fight is the best deterrent." It is only fitting to mark this quarter century of preparedness with a look back into the history of the SAC alert concept.

In 1946, the Strategic Air Command was established with a deterrent mission of global proportions. Gen Carl Spaatz, commanding general of the Army Air Forces, issued the new command's charter: "The Strategic Air Command will be prepared to conduct long-range offensive operations in any part of the world . . . to conduct maximum range reconnaissance over land or sea . . . and to provide combat units capable of intense and sustained combat operations employing the latest and most advanced weapons." These words, born out of the lessons of World War II, would set the cornerstone of our deterrent policy for far longer than then imagined.

During its first 11 years, SAC enjoyed virtual supremacy in the skies, demonstrated by its round-the-world flights, proving it could reach anywhere on the face of the earth. Its bases were literally "saturated" with aircraft. But by 1957, the Soviets had shown significant progress in the development of intercontinental ballistic missiles and the SAC force was becoming vulnerable. This new threat brought the potential conflict to our own shores and placed at risk the survival of our forces.

Hedging against the day when its aircraft could come under an ICBM attack and would have only minutes to respond, SAC countered with the ground alert concept whereby it would maintain approximately one-third of its aircraft on alert with weapons loaded and crews standing by for immediate takeoff. Three extensive tests conducted in 1956-57 determined that the concept was valid, although there remained many organizational and operational details to be resolved. With a sense of urgency, SAC began the one-third ground alert program for selected bases both in the CONUS and abroad in the fall of 1957. Through the alert concept, SAC would be able to survive a portion of its forces by being constantly ready and to deliver a decisive blow or warning to any would-be aggressor, thus retaining the ability ". . . to conduct long-range operations in any part of the world" no matter what the threat.

Since 1957, SAC's alert concept has been challenged many times. A major test occurred in 1962 when the Soviets were maneuvering to shift their influence into the western hemisphere by moving ballistic missiles into Cuba. SAC responded with an overwhelming airborne and ground alert to reflect our capability and our will. SAC's reconnaissance assets provided the hard photographic evidence to prove the communist buildup in Cuba. It was in part this rapid responsiveness of SAC forces that convinced the Soviets to remove their missiles. SAC had been tested and found ready to meet the challenge, thanks to the alert concept that facilitated U.S. resolve.

During the Vietnam War, SAC forces were tasked with a dual role which further emphasized the importance of the alert concept. SAC was charged with conducting conventional operations in Southeast Asia, while maintaining the required strategic nuclear alert posture at home. With a significant portion of aircraft involved in Southeast Asia, the strain on alert aircrews to provide the nuclear shield was offset significantly by the expansion of the new ICBM force, which was complete by 1967. SAC's alert responsibilities were still its first priority and were maintained despite the absence of bomber and tanker forces from their

Maj Gen Christopher S. Adams, Jr. SAC Chief of Staff

home bases — yet another example of SAC's determination to maintain the balance of world peace through its commitment to preparedness through the alert concept.

In 1973, the Soviets demonstrated strong interest in intervening into the Middle East situation with possible overt action. This potential threat was countered in great part by SAC forces, which were generated and exercised to reflect an extensive strategic capability demonstrating to the Soviets that their intervention into the Middle East would not go unchallenged. Once more the responsive nature of SAC alert forces gave the U.S. a vital instrument of national will that clearly demonstrated to the rest of the world our ability to execute our determination in ". . . any part of the world."

Today, SAC's long proven alert concept still faces many challenges, and our combat crews stand ready to support the mission with unrelenting resolve. Wherever the threat of aggression may stem, SAC's alert forces have the resources available to ". . . provide combat units capable of intense and sustained combat operations employing the latest and most advanced weapons." Events in the past quarter century have severely tested the rationale for the SAC alert requirement and it remains as vital today as it was on that first day back in 1957. I hesitate to wonder where our country and our freedoms would be today if it were not for the hard work, sacrifices, and preparations by our combat crews, both aircraft and missile, over the years. The free world is indebted to you and those before you. ★ ★

# Combat Crew

*Magazine of the Strategic Air Command · 32nd Year of Publication*

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ON OUR COVER
SAC's Alert Force — ready then, ready now — celebrates its 25th anniversary.

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DEPARTMENT OF THE AIR FORCE

**Capt Donald E. Keltner**
**341st SMW, Malmstrom AFB**

In the best selling novel, *Roots*, author Alex Haley struck a universal nerve in the people who read it. That is, the universal appeal of finding out where we came from. On the 22d through the 26th of June, 1982, the 490th SMS came face to face with its roots. The squadron hosted a reunion for the 490th Bomb Squadron. The experience will be remembered by both units for years to come.

The 490th was activated in 1942 and assigned to the 341st Bomb Group operating out of India. Flying B-25s, the 490th's main job was interdiction of Japanese supply routes in Burma, primarily bridges. After losses as high as 50 percent using high and low level bombing techniques, the 490th finally found — by accident — the technique which would make them the most famous squadron in the China-Burma-India (CBI) theater.

In 1943, the squadron commander, Maj Erdin, was attempting to sneak up on a bridge at extremely low level. As he approached the target area, an unexpected ridge with trees loomed up in his path. He gunned the B-25 into a slight climb to miss the trees and, while still in a shallow dive attempting to regain proper altitude, was immediately faced with the target — not in the position briefed by intelligence. Cursing into the intercom, he dropped his bomb load in desperation. To the crew's amazement, the bombs skipped down the river and straight into the mail pilings of the bridge. Two spans dropped into the water and the bridge was destroyed. Further experimentation with this "accident" developed the most successful "bridge busting" technique of the war. Thereafter, the 490th was appropriately called the "Burma Bridge Busters."

Through the rest of WWII, the Bridge Busters compiled a record of deeds and effectiveness which earned them two Distinguished Unit Citations and a Presidential Unit Citation. Their skull and wings emblem was advertised in Life Magazine as the top B-25 outfit in the CBI theater. The 490th Bomb Squadron was deactivated in 1946.

In 1973, the surviving members of the Bridge Busters formed an association and began to have squadron reunions every other year. Unknown to them at the time, the 490th had been reactivated in 1961 as a Minuteman squadron in SAC. It was not until 1979 that each group realized the other existed. In 1981 the Bridge Busters met in Louisville, Kentucky, and voted to accept an invitation from the 490th SMS and have a 1982 reunion at Malmstrom AFB.

# Roots

The reunion lasted a week. But in that time friendships were made that will last a lifetime. The "Bridge Busters" and missileers met and learned about each other to the benefit of both. The "Bridge Busters" learned that their freedoms are being maintained on a continuing basis by young men who are now the same age as they were when they first went to India. The missilemen learned that their squadron has one of the proudest traditions of any WWII unit and they listened to their elders with respectful enthusiasm.

L. P. Bloodworth of Sonora, Texas, was a bombardier-navigator in the 490th from 1943-1944. *"We had just bombed a railroad yard south of Miyitkina and were on our way back to Warzup when we got a call from one of the ships in the flight. He had taken some engine strikes and was flying on the other. Now, according to the builder, a B-25 can fly on one engine. It can, but it doesn't fly very high. As my plane was flight lead, we fell back to help navigate them through the passes back to India as their plane wouldn't have enough power to clear the mountains. You can't describe the feeling you get when you hear these guys talking to you on the radio like 'Come on Boogie, get us back.' We tried awful hard. Their gunners kept telling us they were throwing everything loose out of the airplane to lose weight. We went through one pass and ran into some low clouds. We dropped back some more so they could see us and follow but we kept dropping back and dropping back and couldn't find them. The pilot finally turned around and retraced our route. We never saw them again. I remember crying, because they kept asking us to get them through but we couldn't."*

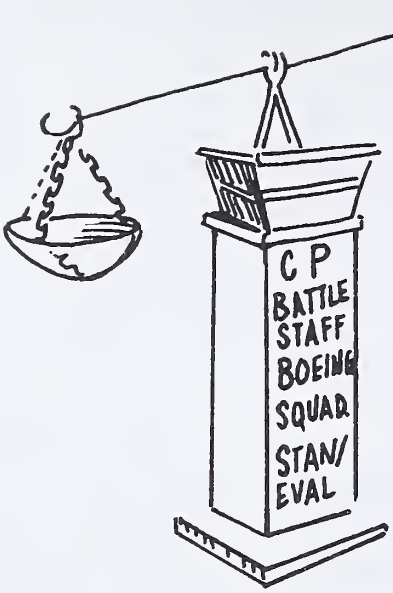
Doug Knokey, Medford, Oregon, was an armaments man in the 490th from 1942-1945. *"We had been without beer for about five months. So the squadron commander, Lt Col McCarten, had us build racks in the bomb bays with 2-by-4s and he sent three B-25s down to Calcutta to pick up a beer shipment. When the airplanes got back they decided to buzz the field to tell us they were back. The pullup was too much for one of the beer racks and it broke. That's how we bombed our own airfield with beer. Guys were dodging those flying cans and cases, but nobody was hurt. One guy was sitting on his bunk writing a letter when one case came through the roof and landed on the floor at his feet."*

Harry Depew from Crescent City, Florida, was a pilot in the 490th from 1942-1944. *"We used to run straight down the river valleys to the bridges with 150 or 200 foot cliffs on both sides. It was usually a surprise when we got to the target bridge, because intelligence never really seemed to be able to pinpoint them on a map. Anyway, we would come barreling in and the flight lead would open up with his machine guns to clear the bridge and anti-aircraft positions. The later model B-25s, the H's and J's, also had a 75mm cannon in the nose fired by the pilot. Anyway, that cannon and the 8-14 .50 caliber machine guns could really clean off a bridge. The next guys in line would drop their bombs and hopefully get the bridge itself. I remember one pilot who was a real hotshot with his guns and would request to be the point man. One mission, he had just passed over the bridge when his plane shuddered, flipped over on its back, and went into the river. It was his 21st birthday."*

Col Robert McCarten (ret), Las Cruces, New Mexico, was the squadron commander for the 490th in 1944. *"We had taken some hits hitting a bridge and I knew we couldn't stay up long. So I climbed as high as possible and bailed out the crew. Fortunately we landed in the jungle. The reason this was an advantage is the Japanese only controlled the roads and towns, they never went into the jungle if they could help it. Everybody formed up together and we started hiking out. Our other stroke of luck was to be picked up by a Burmese tribe who led us out of the jungle and back to base for about $5.00 American."*

The Air Force has begun "Project Warrior." The idea behind the program is to study the Air Force's past and learn for the future. Most people find books somewhat boring and this kind of study sometimes becomes a burden. But when you sit across the table from a man who did the job 40 years ago and see the gleam in his eye or the tear on his face, you can understand more of the Air Force story than any book or film will ever show.

The 490th SMS charges all SAC units to find their roots. The veterans are out there and are more than willing to share their stories and experiences — and more than that, to hear from you what your responsibilities are. It is a mutually shared experience, and the time and effort it takes to meet these people is well worth it. Members of the 490th can assure you that your unit will never again be the same.



# THE DECISION

**Capt John P. Priecke**
**69 BMS, Loring AFB**

The airborne portion of the ORI hadn't gone according to plan from the beginning. In fact, for a while it didn't go at all as the mission was cancelled twice due to thunderstorms in the low level route. The first delay was beneficial as crews recovered from the generation, but now the whole operation was beginning to drag. Finally, on day three, the weather improved enough to try again. I was the instructor pilot/safety observer on the second bomber in cell three. The aircraft commander was noncurrent in night terrain avoidance as was the case for most of our pilots. The IG had given approval for IPs to go along to resolve the currency problem.

From our standpoint it was a freeflow launch and MITO by the book. All appeared normal until shortly after liftoff when the copilot attempted to raise the gear. All four mains remained down and our number two UHF radio was suddenly alive with advisories. We were quickly told that several large flash explosions were observed in the area of our right aft main gear just prior to unstick.

Emergency procedures were immediately implemented as the crew focused on the problem with added emphasis on maintaining safe cell separation. As I anticipated, our ORI mission was aborted and an emergency declared. Prior to obtaining a separate clearance, the number three aircraft came up for a look, but darkness was fast approaching and that visual check provided very little. Cockpit hydraulic indications were in the green until just after leveloff when right body system pressure decreased to zero due to a massive fluid loss. I knew then it was going to be a long night.

As we began our first tech order research session, the command post reported that some 25 pounds of various associated gear parts were found scattered down the runway. Most of our right aft main gear was now laying on the conference table in the command post. Catastrophic failure of the inner and outer gear bearings and wheel assemblies was suspected. Maintenance advised that we would have no right side brakes, steering or hydraulics, with or without standby pump pressure. Boeing technical representatives were now on the line, pressing for immediate diversion to Edwards.

As the already formed battle staff considered the facts, a holding pattern was established away from populated areas, conserving fuel and permitting a comprehensive analysis and discussion among the crew on the multitude of possible scenarios. After much deliberation, the decision was to remain in the local area, onload additional fuel due to the excessive degradation caused by the four extended main gear, and launch a Loring ACE Detachment T-37 at first light for close visual observation to determine the total extent of the damage. The Edwards option was still open based on the findings of the morning chase operation, but due to several key concerns, that alternative was a poor choice. Brutal enroute weather with severe thunderstorms and reported tornadoes was causing Loring ORI aircraft to abort the low level route. Furthermore, the divert would require a total of three refuelings of 100,000 pounds onload each with no guarantees and the possibility of an air abort to an unplanned, completely unfamiliar location.

The first KC-135 returning from the ORI was rapidly regenerated and relaunched. As we neared minimum gross weights for refueling, inflight replanning was completed and a nonstandard track was coordinated with ARTCC to expedite fuel transfer. The refueling was a definite challenge because of our light gross weight, unusual configuration, intermittent tanker director lights, and poor weather in and out of clouds. It was a real workout. Following a 100,000 pound transfer, a climb to maximum endurance altitude was initiated to conserve fuel and hopefully eliminate the need for additional JP-4 prior to daylight. Holding continued and efforts renewed to consider existing and potential problems, computing and cross-checking critical landing performance data, discussing numerous worst case situations and mentally preparing for a possible divert.

# *IS YOURS*

On the ground many people were also deeply involved in our dilemma. Squadron pilots were validating our landing data based on a wide range of gross weights, runway conditions and degraded systems. An experienced navigator prepared divert flight plans and the wing staff processed all the information thus insuring we considered every avenue.

We were all going the same direction and "the system" was working the way it's supposed to. I'd heard stories and been in the midst of IFEs before when things had and hadn't happened due to lapses in communication direction between key personnel on the ground and the crews in the air. This wasn't the case.

Landing weather at Loring was also a prime concern. The forecast called for rain showers in the vicinity and a wet runway would complicate efforts, demanding a divert due to excessive landing ground run. That prediction didn't materialize and the surface condition was dry at touchdown.

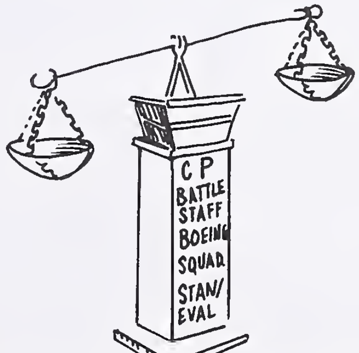
At dawn a chase aircraft was launched and a careful visual check was accomplished followed by two low approaches so ground observers could confirm the gear status, especially alignment. While the tire was still hanging from the strut, there wasn't much left of the gear itself. The final decision was to land at Loring and gross weight was reduced to the optimum condition of 225,000 pounds. Boeing indicated a fuel imbalance would not be necessary as a precaution in reducing landing impact stress on what was left of the right aft main gear; however, we (the aircrew) decided a 2,500 pound left wing heavy configuration was essential in this particular situation . . . a pivotal decision.

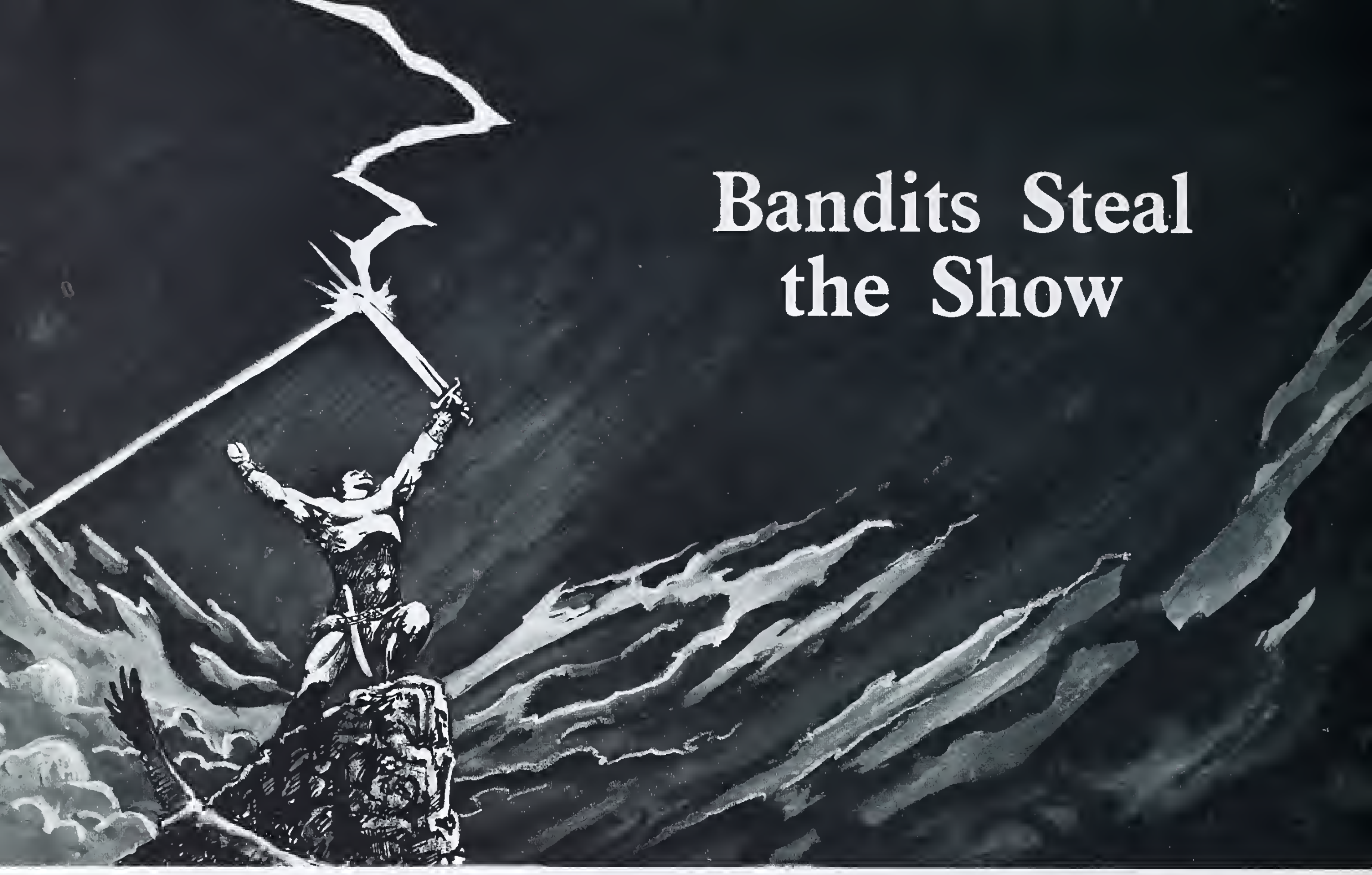
The aircraft commander made a picture-perfect final landing and touchdown with the left aft gear contacting the runway first as planned to minimize any further damage/difficulties. When the landing was confirmed and as additional gear components continue to trail from the right aft wheel well, engines one, two, six, seven and eight were shut down. Left side braking was applied cautiously and the aircraft came to a complete stop with less than a thousand feet of runway left. The remaining engines were shut down, checklists completed and maintenance subsequently began to tow the bomber off the active. In the turn, weight was placed directly on the right aft main gear and the tire and what was left of the wheel assembly departed the aircraft. Post mission analysis revealed that if the fuel differential had not been established, separation would probably have occurred at touchdown or rollout, causing controllability problems, possible gear collapse or a high speed ground loop resulting in more damage and injury to the crew.

### Lessons Learned

Use "the system," communicate, definitely ask questions. A wealth of manpower, experience and expertise are available which can provide essential information, cross-check and direction.

Every emergency is unique. Weigh advice from the ground based on the specifics of your situation. The ultimate judgment and decision belongs to the crew.





# Bandits Steal the Show

## SAC'S WEAPON LOADING COMPETITION

ELLSWORTH Wins! The hometown Black Hills Bandits stole the show by capturing the Barrentine Memorial Trophy at SAC's 1982 Combat Weapons Loading Competition.

Teams from 19 bomb wings arrived at Ellsworth in mid September and brought with them the excitement and enthusiasm that characterizes each year's competition. In a welcome message to the participants and visitors of the loading competition, General Bennie L. Davis, commander in chief, SAC, stated that the enduring element providing the true strength of the command is its people. He added, "The competition provides an opportunity for SAC's munition's loading security and aircraft crew chief personnel to demonstrate the combat skills upon which our strategic deterrent capability depends."

"It's good to see the competitors who have come in the spirit of friendly but professional competition," said Col Robert F. Durkin, commander, 28th BMW. "With all the talent that is assembled in such a small area there is a need for luck to be able to win," Col Durkin said.

"You're all winners before you start today," pointed out CMSgt Thomas Burns, 15th AF senior enlisted advisor, "You'll always maintain that status." Maj Gen Stanley C. Beck, vice commander, 15th AF, stated, "This next week will provide you with an opportunity to test your skills, observe the best of your contemporaries and in the case of the security police, go head to head against them."

"The eyes and ears of the enlisted force of SAC and all the world are on you," Chief Burns noted.

The competition began with written tests and tool box inspections for the munitions teams. Was this really the "Best of the Best"? You bet! Eleven teams received a perfect score on their equipment inspection. Carswell forged ahead by scoring the highest, 84.5, on the always tough MMS 100-point written test.

The second and third days involved a flurry of activity as each unit did its best to establish a strong position for the lead. Mere seconds proved to be the determining factor for the best load team as Castle, K I Sawyer and Andersen each unbelieveably accomplished two perfect loads. With scores such as these, it came as no surprise that only six points separated the top four teams in the MMS standings. K I Sawyer and Andersen each tallied 1225.5 out of a possible 1250 but the nod went to K I Sawyer as the 410th MMS performed their perfect loads quicker than the troops from Guam. For the first time in bomb loading competition a tie breaker was necessary to determine the best munitions load crew.

### Crew Chief Competition

SSgt Walter L. "Marty" Martin "walked" this year and as a result captured the Best Bomber Crew Chief Trophy. Last year his rapid walk was judged to be running and it cost him first place. History did not repeat itself as the outstanding 28th OMS crew chief garnered top awards.

After posting the highest score, 45 out of 50 points on the crew chief's written test, the Black Hills Bandit really got down to business and posted perfect scores on both the preload and postload exercises. Crew chiefs from Griffiss and Barksdale also posted three digit scores for both exercises.

### Security Police Action

The 509th SPS from Pease opened up an early lead by posting the best score on testing. The SPs from Fairchild fought back during the practical exercises, scoring 470 of a possible 480 points on both simulations to post the best field scores. The weapons firing event would determine the eventual winner. The "sure shots" from Mather won this event but the steady performance of the Black Hills Gang earned them overall first place honors with 1415 of 1500 possible points.

### Giant Sword

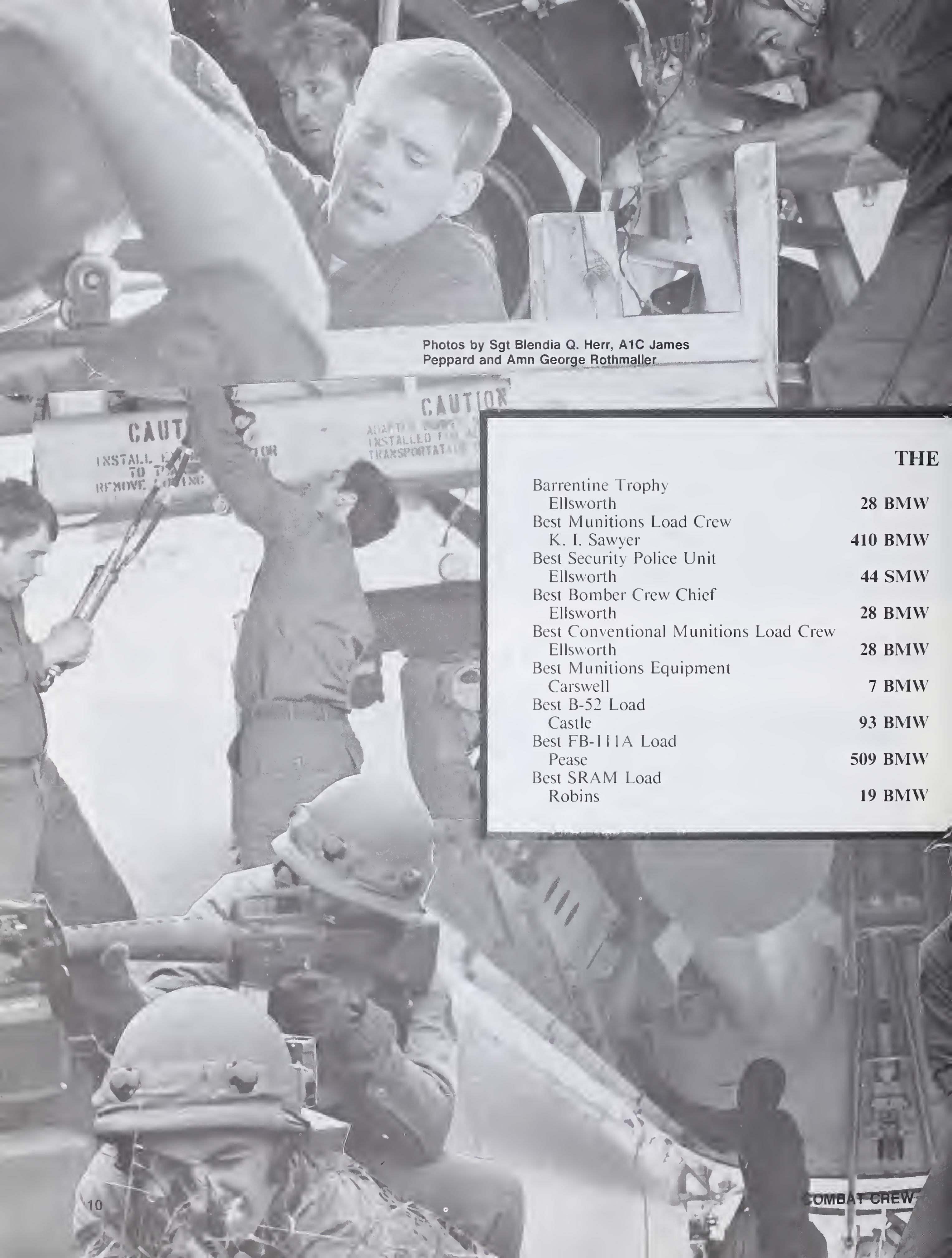
Competition for Giant Sword trophy for the Best Conventional Munitions Load Team was extremely tight between the six competing units. It was another event which was determined by one point. Ellsworth edged Minot for the trophy, 447 to 446.

### The Best of the Best

After seven days of furious action, keen competition and great camaraderie, the dust from the Black Hills settled around the scoreboard and the Hometown Bandits were the victors.

As emphasized throughout the competition, the agony of defeat was never present at Ellsworth. Every team felt the pride of representing their wings as the best at what they do. Each person brought something away as valuable as a trophy. It is not a tangible than can be placed in a trophy case, but rather a regeneration of the spirit of competition and a sense of team work. The spirit of the competition is symbolized by the Spirit Bell Trophy. This year's presentation was voted to go to the team from Loring AFB by their fellow competitors. Next year will see new teams and new faces, but the goals and the desire to excell will not change. Each team member will again play his part in the selection of the Best of the Best.

Straining muscles were the norm as load crews race the clock.



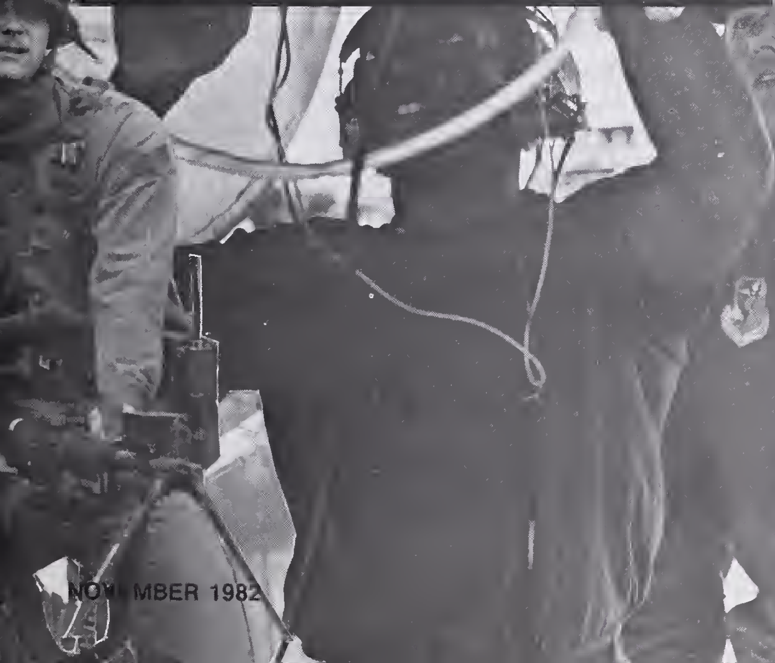
Photos by Sgt Blendia Q. Herr, A1C James Peppard and Amn George Rothmaller

## THE

| | |
|---|---|
| Barrentine Trophy<br>Ellsworth | **28 BMW** |
| Best Munitions Load Crew<br>K. I. Sawyer | **410 BMW** |
| Best Security Police Unit<br>Ellsworth | **44 SMW** |
| Best Bomber Crew Chief<br>Ellsworth | **28 BMW** |
| Best Conventional Munitions Load Crew<br>Ellsworth | **28 BMW** |
| Best Munitions Equipment<br>Carswell | **7 BMW** |
| Best B-52 Load<br>Castle | **93 BMW** |
| Best FB-111A Load<br>Pease | **509 BMW** |
| Best SRAM Load<br>Robins | **19 BMW** |

## WINNERS

| | | |
|---|---|---|
| Best MMS Testing | Carswell | 7 BMW |
| Best Crew Chief Preload Exercise | Ellsworth | 28 BMW |
| Best Crew Chief Postload Exercise | Ellsworth | 28 BMW |
| Best Crew Chief Testing | Ellsworth | 28 BMW |
| Best SPS Practical Exercise | Fairchild | 92 BMW |
| Best SPS Marksman | Mather | 320 BMW |
| Best SPS Testing | Pease | 509 BMW |
| Best SPS Supervisor | K. I. Sawyer (TSgt Macksey) | 410 BMW |
| Spirit Bell Award | Loring | 42 BMW |



# NOTES

**Capt Paul K. Birchak**
**Wurtsmith AFB**
**Capt Donald V. Dancak**
**Lackland AFB**

"Pilot, this is the nav. PECP now."

"Roger. Crew, we're descending into low level at this time. Copilot, crosscheck all headings and altitudes. Checklist."

The throttles come back, the airbrakes go up, the masks go on, and the heads go deeper into the cockpit. From FL 240 to the final descent altitude things go very quickly. Continual crosschecking, particularly those all important altitudes, keep the crew totally involved with the mission. Center gives an occasional traffic update but no one ever sees another aircraft . . . just another radio call to answer. We know to look carefully for terrain clearance as recent events have even more keenly honed our senses. Center gives another traffic update. Again, "No joy." Suddenly the copilot grabs the yoke, pulls up and turns abruptly!

After the crew settles down, a few choice words are heard and then ". . . bug smashers! Don't they ever look where they're going? Who'd ever want to fly one of those things around a published low level route?"

The answers to these questions are really simple. First, no one really wants to fly around a published low level route — in anything! The reason it happens is more complex. As important as why "they" fly on "our" low level routes is how "we" prepare "ourselves" for low level flying and in understanding the makeup of a pilot flying slow enough to take a birdstrike from behind. Having been SAC aircraft commanders and also having logged nearly 2000 combined hours in the T-41 (Mach .15), we feel that we can share some important perceptions about the constant battle of the heavies and the bug smashers.

First of all, no one owns the skies within the low level routes. They are free game for all aviators. Second, only a select few of all aviators have a military flying background, let alone one that would make them familiar with high speed, low

# FROM TWO "BUGSMASHERS"

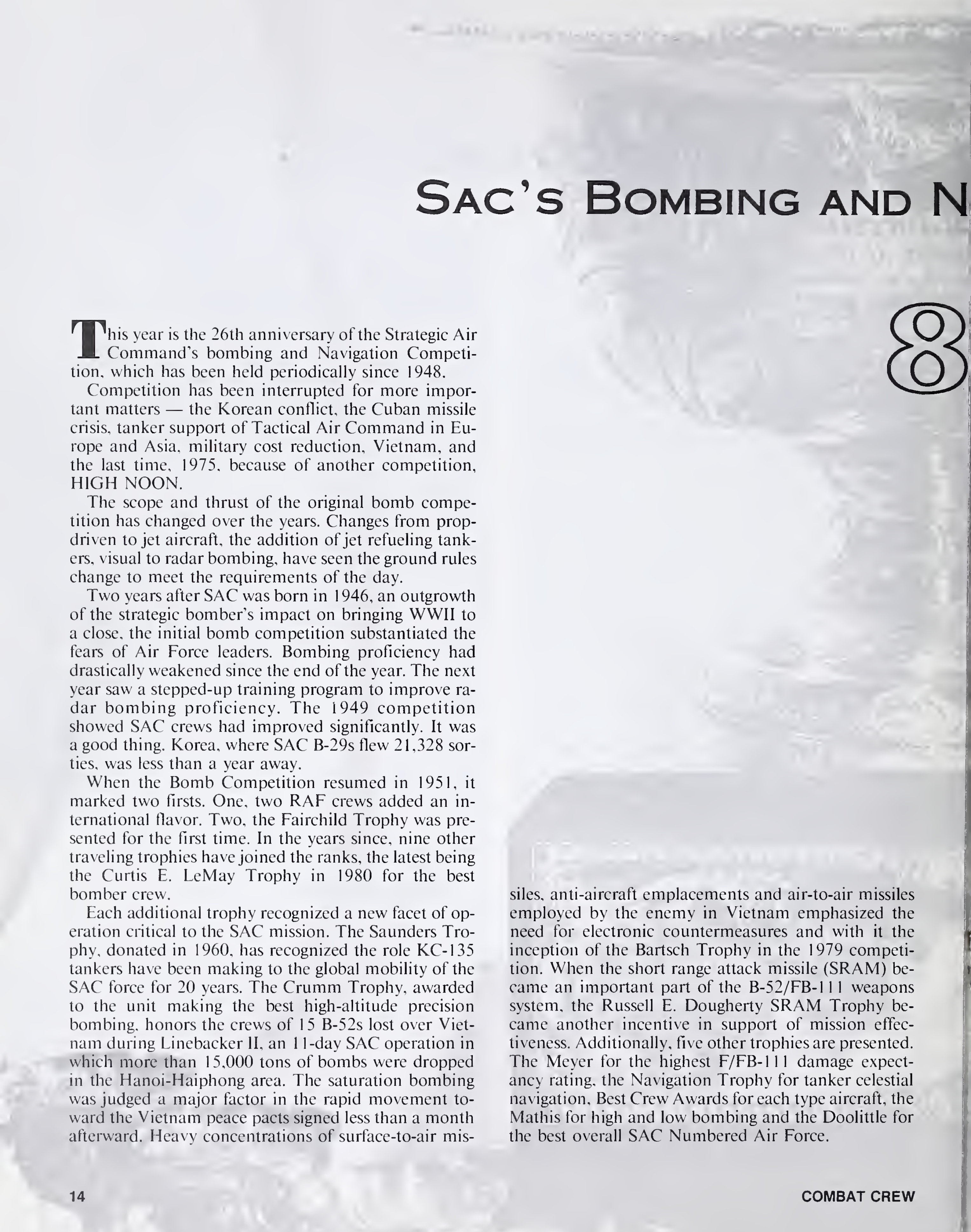
level flying. Third, most civilian pilots are either sightseeing or going from point A to point B in the most direct, cost effective manner. Uncle Sam doesn't pay their fuel bill. Fourth, the old saying you learned in UPT is still true: civilians don't clear. Let us clue you in on something else, too. They don't flight plan either. This is not a large sweeping swipe at the general aviators who are excellent pilots. Those excellent pilots will not get us in trouble. Rather this is what we've seen and felt for the last five years.

If you were to ask the average pilot who has just flown from Denver to St. Louis how many low level routes were crossed during the trip, the pilot would not know. If you ask if FLIP was consulted, the answer may well be, "I don't know any TV stars, let along Mr. Wilson." The civilian regs publish all military routes, but it sure does take a lot of time to sit and research them when no one bothered to teach the civilian pilot how to use them properly. The most important thing to keep in mind during ground proximity flying is that general aviators just don't know about published low level routes. If they do know about them, there is a tendency towards complacency. "After all, those guys flying the big airplanes are professionals who know what they're doing. They won't hit me, the little pleasure flyer. Why, I've heard all about those pretty radar scopes and TV screens they have to see me long before I could see them."

So how can you prepare better? Don't become complacent. Surely you've heard the following transmission more than once: "You have traffic at one o'clock, slow moving, altitude unknown." The reason the altitude is unknown is that the target aircraft is not under radio contact with Center nor does it have a Mode C transponder. What this means to you is to watch out. If your responsibility seems to increase at this time, it shouldn't. What really may have happened is that you may have allowed yourself and your crew to become overly complacent about clearing outside in order to accomplish checks, monitor instruments, update charts, check the fuel gauges, call flight service, call the bomb plot, eat a box lunch or a myriad of other things. Frequently the thing farthest from the collective minds of crewmembers is another aircraft. It actually sounds like a twist to the adage you learned in UPT: military pilots don't clear. That even grates on our ears. As a military pilot, to hear someone say that should make you mad. Yet when you think about it, do we? Do we really clear? After having been nearly run over by many of our own UPT fraternity buddies, we're really not too sure.

One doesn't have to be on a published low level route to meet other aircraft. Take the time a six ship MITO launch took place. On initial climbout, a Cessna 150 flew through the middle of the pack. No call from departure, tower, Foxtrot, or mother. He was just there. Suddenly there were six different departure tracks. When your base is near a civilian airfield your chances for survival diminish unless you follow an active clearing routine and prioritize the responsibilities around that. Strange field penetrations and transitions are somewhat commonplace for tanker crews but not so common for bomber crews. It is easy to become either complacent or distracted by letdown plates and checklists. Plan ahead to incorporate clearing and the workload will not increase when approach calls out traffic for you.

Through the years, we have seen many pilots who do their crews a large injustice when flying low level or in the terminal transition area. They can become so "mission oriented" that they fail to use the mainstay of VFR flying: See and avoid. Avoiding is relatively simple if you can initiate the first part. In order to see, you must clear constructively, not only by listening to traffic reports from center but more importantly by visually clearing when there is no report from center. Clearing is not a part time job to be done only from the IP seat, when told to, or after everything else is finally done. It is a full time job which is vital to the safety of your crew, your aircraft, and us, the little bug smashers. You can be an old pilot or a bold pilot — the choice is yours.



# SAC'S BOMBING AND N

# 8

This year is the 26th anniversary of the Strategic Air Command's bombing and Navigation Competition, which has been held periodically since 1948.

Competition has been interrupted for more important matters — the Korean conflict, the Cuban missile crisis, tanker support of Tactical Air Command in Europe and Asia, military cost reduction, Vietnam, and the last time, 1975, because of another competition, HIGH NOON.

The scope and thrust of the original bomb competition has changed over the years. Changes from prop-driven to jet aircraft, the addition of jet refueling tankers, visual to radar bombing, have seen the ground rules change to meet the requirements of the day.

Two years after SAC was born in 1946, an outgrowth of the strategic bomber's impact on bringing WWII to a close, the initial bomb competition substantiated the fears of Air Force leaders. Bombing proficiency had drastically weakened since the end of the year. The next year saw a stepped-up training program to improve radar bombing proficiency. The 1949 competition showed SAC crews had improved significantly. It was a good thing. Korea, where SAC B-29s flew 21,328 sorties, was less than a year away.

When the Bomb Competition resumed in 1951, it marked two firsts. One, two RAF crews added an international flavor. Two, the Fairchild Trophy was presented for the first time. In the years since, nine other traveling trophies have joined the ranks, the latest being the Curtis E. LeMay Trophy in 1980 for the best bomber crew.

Each additional trophy recognized a new facet of operation critical to the SAC mission. The Saunders Trophy, donated in 1960, has recognized the role KC-135 tankers have been making to the global mobility of the SAC force for 20 years. The Crumm Trophy, awarded to the unit making the best high-altitude precision bombing, honors the crews of 15 B-52s lost over Vietnam during Linebacker II, an 11-day SAC operation in which more than 15,000 tons of bombs were dropped in the Hanoi-Haiphong area. The saturation bombing was judged a major factor in the rapid movement toward the Vietnam peace pacts signed less than a month afterward. Heavy concentrations of surface-to-air missiles, anti-aircraft emplacements and air-to-air missiles employed by the enemy in Vietnam emphasized the need for electronic countermeasures and with it the inception of the Bartsch Trophy in the 1979 competition. When the short range attack missile (SRAM) became an important part of the B-52/FB-111 weapons system, the Russell E. Dougherty SRAM Trophy became another incentive in support of mission effectiveness. Additionally, five other trophies are presented. The Meyer for the highest F/FB-111 damage expectancy rating, the Navigation Trophy for tanker celestial navigation, Best Crew Awards for each type aircraft, the Mathis for high and low bombing and the Doolittle for the best overall SAC Numbered Air Force.

# VIGATION COMPETITION

2

Many milestones have occurred in the competition. The 1953 competition saw SAC's first pure jet bomber, the B-47 introduced while the B-29, which delivered the war to Japan and North Korea, made its exit. In 1956, the B-52 Stratofortress, still the backbone of SAC, made its entrance, and two years later the last of the prop bombers, the B-36, was phased out. From 1952 to 1957 the reconnaissance portion of the competition became a separate meet and in 1959 aerial refueling was added to the competition with the introduction of the all-jet KC-135 Stratotanker. The B-58 Hustler saw competition for a decade, from 1960 to 1969. Beginning in the 1970s, the FB-111 became the newest aircraft. Then in 1977, Air National Guard and Air Force Reserve KC-135s became an integral part of SAC's Bombing and Navigation Competition.

SAC crews who participated in the competition — almost a tenth of the SAC crew force — will join their commanders, distinguished civilian visitors, SAC staff members, numbered air force and air division officers as well as those of other major commands and the Royal Australian Air Force to exchange ideas at two symposiums. One is for military participants and the other for civilian guests.

The guests, who come from all parts of the country, will learn more about SAC, its strategic programs and the needs of its more than 100,000 personnel from the commander in chief, Gen Bennie L. Davis, and members of his senior staff.

Military participants also will hear from Gen Davis. Additionally, aircrew members will hear from SAC's Deputy Chief of Staff for Operations, Maj Gen John A. Brashear, while maintenance personnel will hear from SAC's Deputy Chief of Staff for Logistics Brig Gen Harold J. M. Williams. After lunch, aircrew participants will talk with fellow crews as well as the fighter pilots who ran the intercepts on their bombers.

The exchange of information and ideas among both groups in better understanding SAC's mission and ideas on how to improve proficiency, makes the symposium a valuable tool, especially after 26 years of bombing and navigation competitions. Testing teaches. All will learn from the competition and the symposium November 22 to 24 at Barksdale Air Force Base. Eighth Air Force and the 2d Bomb Wing have worked hard as hosts, together with the civilians in the Shreveport-Bossier City area, to make the competition a memorable one.

With crews and civilian visitors coming from Loring AFB, Maine, to March AFB, California, the competition banquet and awards announcement and ceremony will take on a national flavor, one that ties the resolve of Americans together.

THE CUTTING EDGE

# C-CUBED MODIFICATION

**Maj Francis E. Sobotka**
**3901st SMES, Vandenberg**

Maintaining effective lines of communication have been and continue to be a key military objective. Nowhere is it more important than maintaining command and control over our nation's arsenal of nuclear forces. At the beginning of the last decade, the JCS directed that a newly formed communications system be incorporated into the Minuteman and Titan II ICBM weapon systems. Initiated as a five-part modification, the Command, Control and Communications (C-Cubed) upgrade program involved updating three existing systems and incorporating two new ones. The SAC Automated Communication and Control System (SACCS), the Survivable Low Frequency Communication System (SLFCS), and the Ultra-High Frequency (UHF) radio system were modified to increase their operational capabilities. The two proposed new systems included an Air Force Satellite Communications (AFSATCOM) system and (take a deep breath) the Minimum Essential Emergency Communication Network Message Processing System (MMPS). The MMPS was subsequently deleted in 1979, however, the AFSATCOM was ultimately approved.

Because of the impact of the C-Cubed modification in operations procedures, crewmembers, the weapon system users, were going to require extensive training on the new equipment on a continuous basis. Since such training is normally accomplished in launch control center simulators, the Missile Procedures Trainers or MPTs (see Combat Crew, July 1982) would require a corresponding C-Cubed modification of their own.

Initially, relatively few people who operate or maintain the MPTs knew anything about how this MPT modification was to be implemented. But as with any system modification, it was certain that the process from initial concept to actual hardware installation was going to be a complex task. There is no simple, one step process; no one hour, while-you-wait service. Each change to an existing system must follow certain strict procedures as outlined in applicable DOD and Air Force directives. The ultimate objective was to insure that the new MPT configuration precisely duplicated the weapon system in fit, form and function. To the 3901st SMES was entrusted the responsibility of insuring that the C-Cubed trainer modification proposals were practical, technically sound and cost effective.

In 1975, several joint integrated working group meetings were held with USAF, SAC, AFSC, AFLC and affected system program offices. Trainer requirements were identified to insure the C-Cubed system was properly integrated into each MPT. From then until 1979, all aspects of the weapon system modification were monitored for possible impact on the MPT effort. With final MPT baseline configuration scheduled for October 1979, several decisions vital to a successful trainer modification had to be made. The Titan and the Minuteman II trainers did not have SLFCS or SACCS printers — should they now be procured? What type of system should be developed for the MPTs — a new, single stand alone system or one that could be integrated with each of the three existing computer systems? Should the modification be installed by a contractor or by unit personnel?

What training was going to be required for the MPT operators and maintainers, and how was it to be accomplished?

By the end of 1979, most of these issues had been resolved. The decision was made not to procure any additional SACCS printers and to install SLFCS printers only in the Minuteman MPTs requiring them. The most significant decisions related to how the C-Cubed modification was actually going to be incorporated into the MPTs. It was first decided that a stand alone system would be developed. This represented a considerable savings in time and cost. Next, the selection of the PASCAL computer programming language was made. Although AFSC managers were initially reluctant to change from the Air Force directed high order languages (FORTRAN, JOVIAL and COBOL) and skeptical that the Air Force would even consider a waiver, the 3901st SMES program managers pushed for PASCAL. This language was preferred because of the ease with which required programs could be developed and maintained, reduced life-cycle costs, widespread training availability and compatability with the new DOD language under development at that time. Subsequent Air Force approval of the PASCAL language was considered to be a significant milestone in the implementation of the MPT C-Cubed modification. Finally, the decision was made to have the system contractors accomplish the initial modification (kitproof) of one Minuteman MOD and one Minuteman II MPT while the remaining trainers would be modified by the technicians assigned to each missile wing's MPT branch. Because of the pending deactivation of the Titan weapon system, the C-Cubed modification was cancelled for that system. Together, these decisions resulted in a multimillion dollar savings to the government through reduced engineering and installation costs, but most of all through reduced life-cycle costs.

It wasn't until June 1981, at Whiteman AFB, that over 10 years of C-Cubed planning finally culminated in the first MPT kitproof being accomplished by the Boeing Aerospace Company. Two subsequent kitproofs were completed at F. E. Warren AFB (the first installation by unit personnel) and Vandenberg AFB (Sylvania GTE Products Corporation's kitproof to the Minuteman II trainers).

In the end, the MPT kitproofs were successfully completed, and the lessons learned during the C-Cubed development will benefit future modifications of this magnitude. Even while the C-Cubed Phase I is being installed throughout the Minuteman Force, Phase II is already under development. The end of this decade will witness the completion of one of the Air Force's most ambitious efforts to update its command, control and communications system, and our MPTs will be there to insure our missile combat crews are ready and able.

# DON'T GET PITCHED UP . . .

# CONTROL THE POLE

## CFIC CORNER

Major Hugh E. Smith
CFIC Castle AFB

A student once told me that everything in life can be described as either "GOOD" or "NOT GOOD." While this is probably true, there are situations that make the transition from one category to the other. By now most bomber pilots are aware of the importance of precise pitch control during low altitude, low airspeed operations (takeoffs, landings, go-arounds). Precise pitch control becomes even more important if an engine or engines are inoperative. We have noticed an alarming number of B-52 pilots who have confused precise pitch control with "PUSHING ON THE POLE"! A review of what is "GOOD" and "NOT GOOD" in the asymmetric thrust situation may be of some help. Let's briefly look at what happens when we lose an engine or engines, and then compare what the pilot wants to do with what the aircraft wants to do.

When engine loss occurs during takeoff or go-around, the first thing the airplane tries to do is yaw in the direction of inoperative engines. The degree of this yaw depends on which engines failed and the power setting on the corresponding opposite engines. The next thing the airplane wants to do is roll. The big reason why the aircraft wants to roll is what Boeing has referred to as "roll due to yaw" (See fig 1). Roll due to yaw occurs when one wing produces more lift than the other. This lift imbalance is due to two changes which are the result of yaw; as the aircraft yaws, the "effective span" of each wing changes. The wing with inoperative engines becomes effectively shorter and the other wing becomes effectively longer. Several orders of magnitude more effective is the change in "effective sweep." The wing with inoperative engines becomes effectively more swept and the other wing becomes more straight. What can the pilot do to combat this yaw and roll?

Obviously the pilot should apply rudder and lateral control. Which rudder and how much? Just keep the aircraft on centerline or track a ground reference if airborne. Somewhat less obvious is that the longer the pilot waits to stop the yaw/roll, the more control is needed to return the aircraft to a static flight condition. If pilots are slow to recognize the yaw/roll condition, they may find themselves in a situation where full rudder and full lateral control may not be enough. In this situation several alternatives are available. The two primary courses of action may be to adjust thrust and/or make the controls more effective by increasing airspeed. It should be noted that in many situations adjusting thrust may not be an immediately available option. Increasing the airspeed turns out to be just a super idea. To understand why airspeed is so neat, you should know that since you can't change the surface area of your flight controls, the only thing you can change is the dynamic pressure on them. Dynamic pressure(q) is defined as:

$$q = \tfrac{1}{2}\rho V^2$$

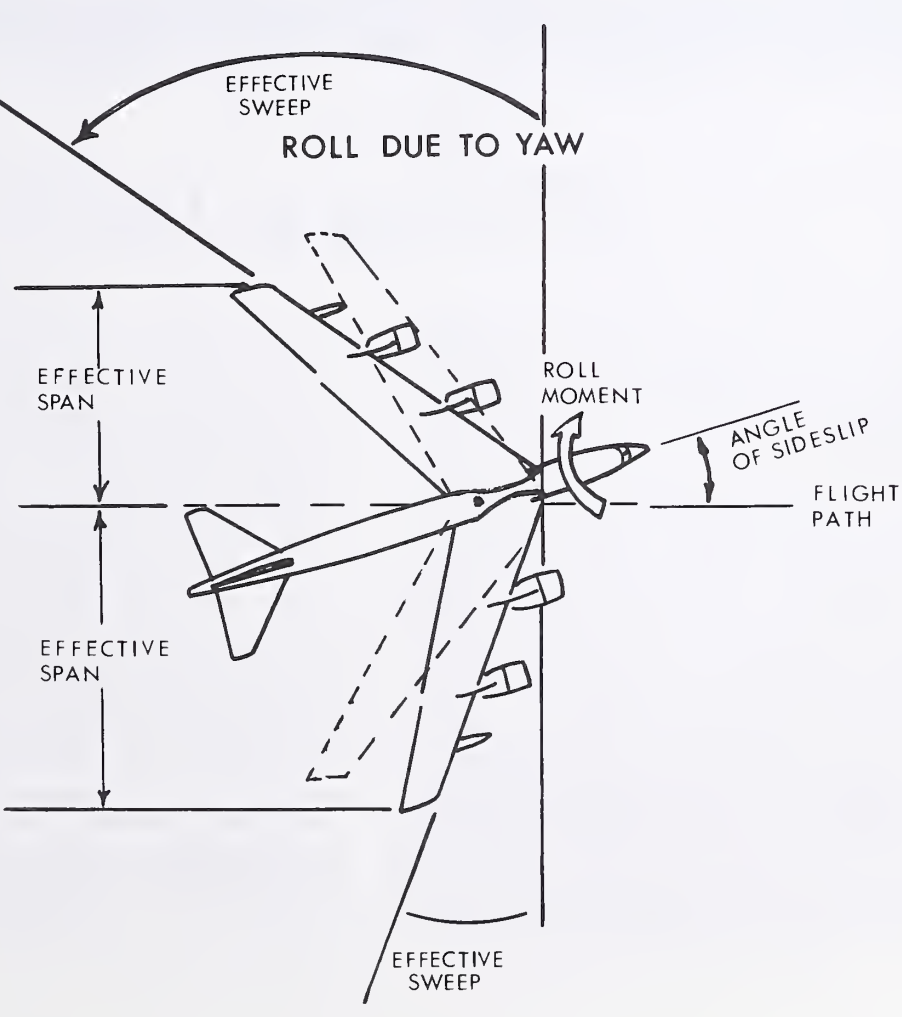
$\rho$ is the pressure of the air (.002377 on a standard day . . . in Omaha) and you can't do much about that either. V is the velocity and not only can you affect the velocity (airspeed), it is *squared!* It's rather handy that the only thing you can affect happens to make the biggest difference. What then can we do to increase airspeed?

When the nav says "Pilot, give me 470 TRUE," we increase thrust. This can be an option in the asymmetric condition but we certainly don't want to increase *asymmetric* thrust! Reducing drag is also a good idea, but if the aircraft is pitching up rapidly we wouldn't want to increase that pitch up by retracting the gear. Retracting airbrakes could be good but some lateral control authority could be lost. You do want to retract the gear and the airbrakes but when you do it might have to be qualified. As it turns out, effective pitch control is the pilot's most expeditious means to insure acceleration.

Now that we've decided to increase airspeed by precisely controlling pitch, let's look at what the aircraft will do if left unattended during the low altitude, low airspeed scenario. If spoiler is applied into the operative engines, the nose will pitch up. At certain gross weights — anything other than full tanks — fuel shift may cause the nose to pitch up. If thrust is increased, the pendulum effect of the underslung engines will cause the nose to pitch up. As airspeed increases the nose will pitch up. Retracting the gear pitches the nose up. Exiting ground effect causes the nose to pitch up. A few moments of inattention during unstick or go-around can dangerously increase the pitch attitude. The Dash-1 makes reference to "20 degrees of pitch, in three seconds, from which recovery may be impossible." So there's the rub; the pilot wants to keep the pitch attitude flat and the aircraft wants to pitch up. The answer to this problem is *PRECISE PITCH CONTROL!*

Precise pitch control means that the pilot anticipates all the abovementioned forces and allows no major trend to develop. If no major pitchup is started, the fuel shift problem is significantly reduced. If the aircraft doesn't just leap out of ground effect, this portion of the problem is also greatly reduced. Control inputs to manage pitch can be quite small even in the low airspeed, low altitude, engine out situation. The key is to not allow any major pitch *rate* to develop.

Misunderstanding the pitch problem can be just as dangerous as not even knowing it. The pilot who allows a large pitch rate to begin will be required to make large elevator and trim inputs, but the pilot who anticipates the pitch and therefore manages it properly, will not have to "PUSH ON THE POLE" very much. Flying the aircraft back into the runway will not insure an oak leaf cluster on your longevity ribbon. Oak leaf clusters on your longevity ribbon are "GOOD."



# Big I

## Pilot/Controller Roles and Responsibilities

Capt Bud Holland
1CEVG, Barksdale

In the September 1982 "Big I," "The Other Side of the Coin," we covered certain specific information on what the air traffic controller expects from us when we are given certain instructions. Now let us cover some of the basic pilot/controller roles and responsibilities.

The roles and responsibilities of the pilot and controller for an effective ATC system are contained in the myriad of manuals and regulations we all carry and are responsible for plus the FAR's. The air traffic controller's are in the Air Traffic Control Handbook (7110.65) and supplemental FAA directives. The information contained in the above-mentioned regulations has been condensed in the Airman's Information Manual.

The pilot in command of an aircraft is directly responsible for, and is the final authority as to the safe operation of that aircraft. In an emergency requiring immediate action, the pilot in command may deviate from any rule.

The air traffic controller is responsible to give first priority to the separation of aircraft and to the issuance of radar safety advisories; second priority to other services that are required but do not involve separation of aircraft and third priority to additional services to the extent possible.

In order to maintain a safe and efficient air traffic system, it is necessary that each party fulfill his responsibilities to the fullest. These responsibilities overlap in many areas. Should one or the other fail in any manner, this overlapping responsibility is expected to compensate for failures that may affect safety.

The following is a brief listing of pilot and controller responsibilities for some commonly used procedures or phases of flight.

### AIR TRAFFIC CLEARANCE

**Pilot**

—Acknowledge receipt and understanding of an ATC clearance.

—Request clarification of amendment any time a clearance is not fully understood, or considered unacceptable from a safety standpoint.

—Comply with an ATC clearance upon receipt except as necessary to cope with an emergency. If deviation is necessary, advise ATC as soon as possible and obtain an amended clearance.

**Controller**

—Issues appropriate clearances for the operation to be conducted, or being conducted, in accordance with established criteria.

—Assigns altitudes in IFR clearances that are at or above the minimum IFR altitudes in controlled airspace.

### INSTRUMENT APPROACH

**Pilot**

—Be aware that the controller issues clearance for approach based only on known traffic.

—Follow the procedure as depicted on the Instrument Approach Procedure, including all restrictive notations, such as: procedure not authorized at night, approach not authorized when local altimeter not available, straight-in minima not authorized at night, etc.

—Upon receipt of an approach clearance while on an unpublished route or being radar vectored: comply with the minimum altitude for IFR, and maintain last assigned altitude until established on a segment of a published route or Instrument Approach Procedure, at which time published altitudes apply.

**Controller**

—Issues an approach clearance based on known traffic.

cont on pg. 24

1Lts P. G. Swanson and W. D. Reilly

# HEADS UP

1Lt Paul G. Swanson and 1Lt William D. Reilly III were preparing to depart Westover AFB after a weekend of ACE flying in a T-38. Lt Swanson was in the front cockpit and Lt Reilly in the rear. Takeoff roll was normal to 135 knots. Lt Swanson began to rotate the aircraft for takeoff at which time both pilots observed several large birds circling near the departure end of the runway. The aircraft lifted off the runway at approximately 160 knots. At that instant one bird narrowly missed the canopy while another was ingested into the right engine. A large thump was heard followed by the right engine RPM rolling back to idle. With this critical loss of thrust, Lt Swanson allowed the aircraft to settle back to the runway, lowered the nose slightly and began to accelerate to single-engine takeoff speed of 167 knots. He then advanced both throttles and rotated the nose for takeoff. Meanwhile, Lt Reilly observed the right engine begin cycling between idle RPM and 100 percent RPM and the EGT rise above safe limits. After the aircraft was safely airborne and the gear retracted, he advised Lt Swanson to retard the right throttle to idle position. In idle the engine appeared to operate normally. While Lt Swanson declared an emergency and coordinated with tower for an immediate landing, Lt Reilly read through the applicable checklists to ensure all appropriate items had been executed and cleared their flight path for conflicting traffic. The aircraft was flown around a wide box pattern using minimal bank angles, and set up for a straight-in landing. The ensuing heavyweight, single-engine full stop landing was flawless, with both crewmembers safely egressing the aircraft after engine shutdown. Lt Swanson and Lt Reilly utilized superior crew coordination and flying skill handling a potentially disasterous inflight emergency. Their outstanding airmanship resulted in the safe recovery of two crewmembers and a valuable Air Force aircraft.

# PROFESSIONAL PERFORMERS

## MISSILE MAINTENANCE

TSgt Dennis G. Hall, 341st SMW, Malmstrom AFB, is SAC ICBM Maintenance Airman of the Month. After training the "best pneudraulics team in SAC" in 1979, Sgt Hall's own team again won that title in 1982. Management procedures he initiated resulted in pneudraulics technicians being qualified in launch facility penetration and backout procedures which resulted in significant manpower savings. His suggestion to rearrange AGE inspections cut two hours running time from the diesel generators which saved $12,000 a year at Malmstrom. TSgt Hall's remarkable accomplishments, dedication to the mission and true professionalism are decisive indicators that he is one of the finest NCOs in the United States Air Force.

## Missile Crew

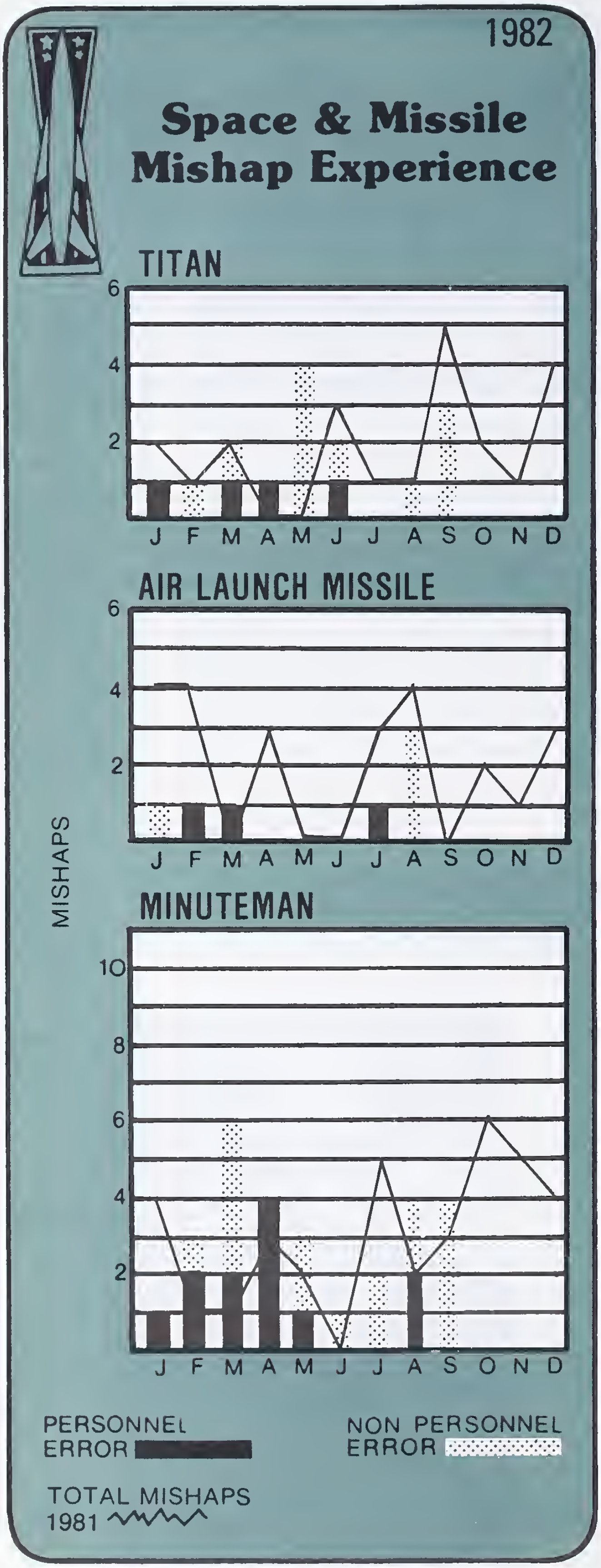
Crew R-172, 390th SMW, Davis-Monthan AFB: Capt Eliberto J. Marques, MCCC; Capt Curtis R. Crane, DMCCC; Sgt David M. Biagianti, MSAT; and A1C Kenneth M. Harvey, MFT, is SAC Missile Crew of the Month. The crew was on alert when the site dropped normal power and transferred to standby power automatically. Within 15 minutes the MSAT and MFT were in the silo to perform the applicable steps of the standby power verification checklist. At level three they discovered diesel fuel leaking from the fuel fittings onto the already hot diesel exhaust manifold. The manifold was smoking and there was a large amount of diesel fuel on the floor, and overflowing to the levels below. After directing shutdown, the MCCC notified the command post and said the crew was going to complete facility power failure checklist since normal power was still not available. After safing the diesel, the MSAT and MFT returned to the control center for their safety equipment while the alarm response team went topside to provide missile site security. Crew R-172's competence and decisive actions averted a potential disaster.

# FLYING CREW

Capt Greg Finan, P; Capt Rich Almeida, CP; Capt John Priecko, IP; Capt Neil Taylor, RN; Capt Jeff Thieret, N; 2Lt Matt Leavitt, EWO; and SSgt Bob Berryhill, G, 42nd BMW, are SAC's Flying Crew of the Month. During an ORI MITO their aircraft experienced flash explosions and fires causing extensive damage in the right aft wheel well seconds before liftoff. All four main gear were also stuck down as a result. At level off, the right body hydraulics failed completely. Brake components were found on the runway and maintenance noted there would be no right side brakes or steering for landing. Boeing personnel indicated a fuel imbalance would not be necessary; however, a 2500-lb left wing heavy configuration was established by the crew. Landing was made left aft gear first to minimize impact damage on the affected gear and the aircraft came to a complete stop with less than 1,000 feet remaining. As maintenance began to tow the bomber off the runway, weight was placed on the damaged gear and the tire and wheel departed the aircraft. Without that crucial fuel differential, separation would have occurred at touchdown or rollout, causing controllability problems, gear collapse, or a high speed ground loop. Due to the superior skills and insight of Crew E-18 and IP Priecko, an extremely serious emergency terminated in total success.

# AIRCRAFT MAINTENANCE

SSgt Jamie D. Clemmer, 7th BMW, Carswell AFB, has been selected as the SAC Maintenance Airman of the Month. Sgt Clemmer demonstrated exceptional technical ability, leadership and initiative in his duties in the aircrew training devices branch. He was primarily responsible for the timely completion of the conversion of the B-52H defensive systems trainer. He volunteered for a 20-day TDY to Ellsworth to supervise the disassemble and shipping preparations insuring that all components were properly labeled and packed. After receiving the trainers at Carswell, Sgt Clemmer personally took it upon himself to sand, prime and repaint the entire T-1 gunnery trainer. The T-4 trainer was ready for aircrew members' training three weeks before schedule. Sgt Clemmer is insuring that the newly assigned B-52H model trainers are brought up to standards. His ongoing maintenance procedures were the prime factor in the 100 percent in-commission rate of the defensive system trainers. The contributions put forth by Sgt Clemmer mark him as one of the top technicians in today's modern air force and a valuable asset to SAC.



# Big I

cont from pg. 20

—Issues an IFR clearance only after the aircraft is established on a segment of published route or Instrument Approach Procedure, or assigns an appropriate altitude for the aircraft to maintain until so established.

### RADAR VECTORS

**Pilot** —Comply with headings and altitudes assigned to you by the controller.

—Question any assigned heading and altitude believed to be incorrect.

—If operating VFR and compliance with any radar vector or altitude would cause a violation of any FAR, advise ATC and obtain a revised clearance or instruction.

**Controller** —Vectors aircraft in controlled airspace, for separation, noise abatement, or to obtain an operational advantage for the pilot or controller.

—Vectors IFR aircraft at or above minimum vectoring altitudes.

—May vector VFR aircraft at any altitude. In these cases, terrain separation is the pilot's responsibility.

### TRAFFIC ADVISORIES

**Pilot** —Acknowledge receipt on traffic advisories.

—Inform controller if traffic is in sight.

—Advise ATC if a vector to avoid traffic is desired.

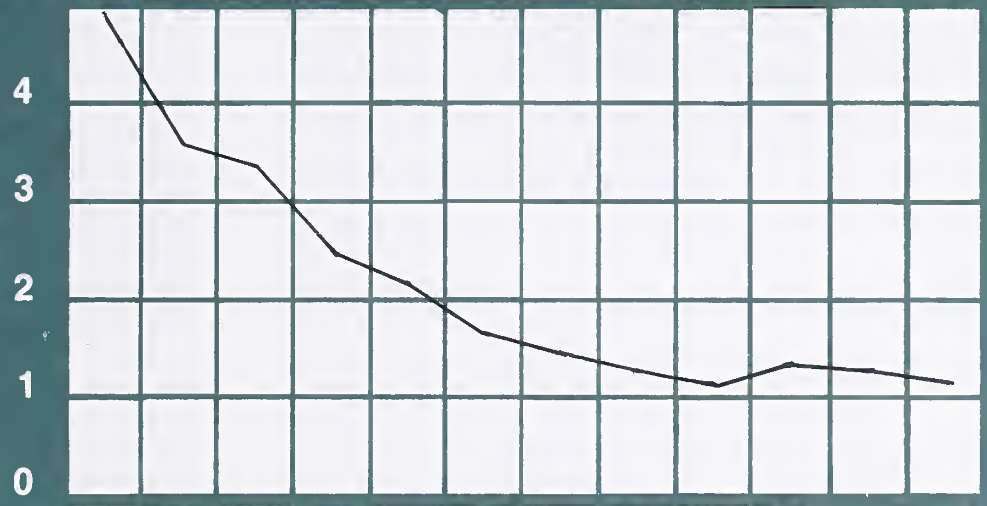
—Do not expect to receive radar traffic advisories on all traffic. Some aircraft may not appear on the radar display. Be aware that the controller may be occupied with higher priority duties and unable to issue traffic information for a variety of reasons.

cont on page 26

# 1982 Flying Safety Rate

## SAC CLASS A MISHAP RATE (PER 100,000 FLYING HRS)

| 1981 RATE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.13 | 3.61 | 3.45 | 2.54 | 2.05 | 1.70 | 1.47 | 1.3 | 1.14 | 1.36 | 1.25 | 1.15 |



| 26.4 | 53.9 | 86.0 | 117.1 | 146.5 | 175.9 | 203.4 | 233.1 | 260.0 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|

CUMULATIVE FLYING TIME (1,000 HRS)

| MISHAPS | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1981 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |

## MISHAP STATUS

| | |
|---|---|
| +KC-135A | MAR 82 |
| +KC-135A | MAR 82 |

LEGEND ∧ = 1981 RATE (SAC)
+ = ANG
– = AFRES

# Big I cont from pg. 24

—Advise controller if service is not desired.

**Controller** —Issues radar traffic to the maximum extent consistent with higher priority duties except in positive controlled airspace.

—Provides vectors to assist aircraft to avoid observed traffic when requested by the pilot.

—Issues traffic information to aircraft in the airport traffic area for sequencing purposes.

### INSTRUMENT DEPARTURES

**Pilot** —Prior to departure: consider the type of terrain and other obstructions on or in the vicinity of the departure airport.

—Determine if obstruction avoidance can be maintained visually or that the departure procedure should be followed.

—Determine whether a departure procedure and/or SID is available for obstruction avoidance.

**Controller** —At airports where Instrument Approach Procedures have not been published, hence no published departure procedure, determine what action will be necessary and take such action that will assure a safe departure.

- —At locations with airport traffic control service, when necessary, specifies direction of takeoff, turn or initial heading to be flown after takeoff.
- —At locations without airport traffic control service, but within a control zone when necessary to specify direction of takeoff/turn or initial heading to be flown, obtain pilot's concurrence that the procedure will allow him to comply with local traffic patterns, terrain, and obstruction avoidance.

—Includes established departure procedures as part of the ATC clearance when pilot compliance is necessary to ensure separation.

### MINIMUM FUEL ADVISORY

**Pilot** —Advise ATC of your minimum fuel status when your fuel supply has reached a state where, upon reaching destination, you cannot accept any undue delay.

—Be aware this is not an emergency situation but merely an advisory that indicates an emergency situation is possible should any undue delay occur.

—Be aware a minimum fuel advisory does not imply a need for traffic priority.

—If the remaining useable fuel supply suggests the need for traffic priority to ensure a safe landing you should declare an emergency, determine low fuel, and report fuel remaining in minutes.

**Controller** —When an aircraft declares a state of minimum fuel, relay this information to the facility to whom control jurisdiction is transferred.

—Be alert for any occurrence which might delay the aircraft.

These have been a few basic pilot/controller roles and responsibilities. For a more comprehensive list see Chapter 4, Section 9, Airman's Information Manual (AIM). While you're thumbing through AIM to get to the pilot/controller roles and responsibilities section, you'll discover AIM is an encyclopedia on basic flight information and ATC procedures. If you have any questions on AIM or any other instrument related area, please call us — we're here to help! That's Captains Rhett Cooper, Colin Crim, and Bud Holland, AV 781-3648.

# SAC SAFETY SCREEN

**19 BMW, Robins Crew E-33:** FP Capt John A Kurtz, CP Capt Marcos Laguna Jr, NB Capt Michael D Hagen, NN 2Lt John V White, NE 2Lt Donovan Carter, IS Sgt Paul R Fultz

**19 BMW, Robins Crew E-118:** FP Capt Frederick F Roggero, CP 1Lt Eric T Jones, NN 1Lt Judd R Bean, BO SSgt James W Hackworth

**51 BMS, Seymour Johnson Crew E-03:** P Capt Robert W Chedister, CP 1Lt Gary R Swanzy, RN Capt Francis M Mackie, N 1Lt John W Hannen Jr, EWO 1Lt John H Schwartz Jr, G SSgt Travis E Hammond

**51 BMS, Seymour Johnson Crew E-05:** P Capt Andrew B Jasinski, CP Capt Gregory Gorniak, RN Capt Phillip J Ratcliff, N 1Lt Stephen K Draper, EWO Capt Thomas W Brown, G SSgt Charles M Denny, IP Capt Robert D Moulds

**911 AREFS, Seymour Johnson Crew R-116:** P Capt Leonard M Jones, CP 1Lt Bradley C Bartholomew, N Lt Col Thomas J Cherney, BO SrA Michael S Rathburn

**97 AREFS, Blytheville Crew E-122:** P Capt Jack Jordan, CP 2Lt Thomas Tucker, N 1Lt Paul J Lewis, BO A1C Jerry D Erickson

**97 AREFS, Blytheville Crew E-123:** P Capt George W Howell, CP 1Lt Michael Gardiner, N 1Lt Alan D Priddy, BO Sgt David A Chambers

**340 BMS, Blytheville Crew S-01:** P Capt Larry Northington, CP Capt William C Hoferer, RN Capt James C Holmes, N 1Lt John R Purrer, EWO Capt Frederick R Moore, G TSgt Lee M Cothran

**340 BMS, Blytheville Crew R-21:** P Capt Bruce M Nelson, CP Capt Dusty K Kennemore, RN Capt Terence W Haynes, N 2Lt Dwight E Wolfe, EWO Capt Mark E Burks, G A1C Jeffrey P Eyler

**524 BMS, Wurtsmith Crew R-14:** P Capt John C Moore, CP 1Lt Kevin F Riebsam, RN Capt Richard B Garner, NN 1Lt Kurt C Anderson, EW Capt Campbell F Thomasson, AG Sgt Wayne Humphrey

**920 AREFS, Wurtsmith Crew E-155:** P Capt Thomas W Kiser, CP 1Lt Gary W Hale, NN Capt Michael J Frei, BO Sgt David W Martens

**22 BMW, March Crew E-34:** P Capt Tony Przybyslawski, CP Capt James Francis, CP 1Lt James Kowalski, RN Capt Michael Morgan, N 2Lt Ron Pacheco, EWO Capt Ed Campbell, G SrA Richard Pironyak

**22 BMW, March Crew 132:** P Capt Joseph A Forstie, CP Capt William M Fisher, CP 1Lt James D Gunning, NN Capt Wayne G Stelts, BO SSgt Derek T Suficiencia

**92 BMW, March Crew S-152:** P Capt Kenneth A Mount, CP 1Lt Carl E Blomstrom, N Capt Gregory A Binder, BO TSgt Thomas M Clyce

**906 AREFS, Minot Crew S-104:** P Capt John H Beard, CP 1Lt Larry G Brockshus, N Capt Andrew H Cox, BO SSgt Richard A Raprager

**23 BMS, Minot Crew E-26:** IP Capt Stephen L Brooks, CP Capt Paul S Castle, IRN Capt Peter T Miller, IN Capt Robert N Shearer, EW 1Lt David V Skipper, AG A1C Brian J Handlin

**55 SRW, Offutt Crew E-114:** P Capt David R Johnson, CP Capt Timothy L Frazier, NN 1Lt Edward M Sacks, BO SSgt Derek O McDonald

**43 SW, Andersen Crew R-35:** P Capt Michael D Sherman, CP 1Lt Primo Acoba Jr, RN Capt Mark K Roland, N Capt Steven A Fratello, EW Capt Michael E Harris, G SSgt Randall R Stewart

**43 SW, Andersen Crew R-21:** P Capt James L Gardner, CP 1Lt Michael P McCutcheon, IRN Capt Willard J Hibbard III, N 1Lt Edward G Knowles, EW Capt Duncan B Baldwin, G A1C Jackie W Cardwell

**381 SMW, McConnell Crew R-183:** MCCC Capt Timothy M Brown, DMCCC 1Lt Jeffery M Hetrick, MSAT A1C John A Allen, MFT A1C Phillip L Rastall

**308 SMW, Little Rock Crew R-103:** MCCC Capt Walter E Reed, DMCCC 2Lt Willie W Walker, MSAT A1C Edward J Gustavus, MFT SrA Colin A Archer

**351 SMW, Whiteman Crew S-155:** MCCC Maj Terry S Pehan, DMCCC 2Lt Daniel Altenes

**The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system *IAW AFR 127-2/SS1.***

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